

ABSTRACT OF THE DISCLOSURE

This invention relates to a process of melt blowing a cellulose solution through a concentric melt blown die with multiple rows of spinning nozzles to form cellulosic microfiber webs with different web structures. The process comprises the steps of (a) extruding a cellulose solution (dope) through a melt blown spinneret with multiple rows of spinning nozzles; (b) drawing each individual extrudate filament to fine fiber diameter by its own air jet; (c) coagulating and entangling the fine fibers with a series of pressured hydro needling jets of recycling solution of the mixture of cellulose solvent and non-solvent in the spin-line; (d) collecting the stream of microfibers, air and needling jets on a moving collecting surface to form cellulosic fiber web; (e) hydro-entangling the said pre-bonded web downstream with at least one set of hydro needling jets of recycling solvent/non-solvent solution for forming well bonded nonwoven web; (f) regenerating the fine fibers in at least one bath for at least 5 seconds; (g) further regenerating and washing the fine fibers in another bath for at least 5 seconds; (h) pinching the well bonded melt blown cellulosic nonwoven with pressure rollers to remove major portions of the non-solvent; (i) drying the nonwoven web by heat, or vacuum or both, and (j) winding the nonwoven web into rolls.